

W  
AF



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of:  
Atsumi KOBAYASHI

Application No.: 10/798,300

Group Art Unit: 3651

Filed: March 12, 2004

Examiner: L.A. Nicholson

For: DOCUMENT TRASPORT APPARATUS AND DOCUMENT TRANSPORT  
METHOD, AND IMAGE READING APPARATUS

**REPLY APPEAL BRIEF UNDER RULE 41.39(b) (2)**

July 9, 2007

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notification of Non-Compliant Appeal Brief mailed on June 21, 2007, the revised appeal brief has been filed, wherein the structure in the means plus function language is identified.

### **REAL PARTY IN INTEREST**

The real party in interest is Assignee Nisca Corporation.

### **RELATED APPEALS AND INTERFERENCES**

Appellant, Appellant's representative, and the Assignee of this application are aware of no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

### **STATUS OF CLAIMS**

This is an appeal from the final rejection of claims 1-8 and 10-13 as presented in the Office Action of January 19, 2007.

Claims 1-8 and 10-14 are pending in the application. Appellant's Second Amendment after Final Action filed April 6, 2006, canceled claim 9 and 15 to reduce the issues on appeal. Furthermore, Appellant gratefully acknowledges the indication that claim 14 contains allowable subject matter. Each of claims 1-8 and 10-13 stands rejected, and the rejection of each of claims 1-8 and 10-13 is appealed.

Claims 1-8 and 10-13 on appeal are set forth in their entirety in the Claims Appendix attached hereto.

### **STATUS OF AMENDMENTS**

Each of the claim amendments presented in Appellant's Second Amendment after Final Action filed April 6, 2006, in response to the Office Action of December 12, 2005, and the Advisory Action of March 20, 2006, has been entered.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed invention relates to an image reading apparatus such as a facsimile machine or a scanner, a document transport apparatus for feeding a document (i.e., a sheet such as paper or a

film sheet) into an image reading section of the image reading apparatus and for discharging the document after an image is read, and a document transport method (specification page 1, lines 6-11).

Problems associated with conventional document transport apparatuses that discharge documents in the order in which they are fed include the required large size of the apparatus (specification page 3, lines 1-6).

Accordingly, it is an object of the claimed invention to provide a document transport apparatus as well as a document transport method in which both sides of the document can be read and the document can be discharged in an original order. Another object is to provide a document transport apparatus having a short length in the lateral direction (specification page 3, lines 7-13).

The invention as defined in claim 1 is directed to a document transport apparatus 1 for an image reading apparatus 100 with a platen 101 (specification page 10, lines 4-6; see Fig. 1). The apparatus 1 includes a sheet feeding tray 3 (specification page 10, line 14; Fig. 1), and a sheet discharging tray 20 (specification page 11, line 24; Fig. 1).

A sheet feeding means 4 (specification page 10, line 14; Fig. 1) for drawing a document from the sheet feeding tray 3 is disposed at one side of the document transport apparatus 1. The sheet feeding means 4 comprises a pickup roller 5, a document stopper 6, a feed roller 7 and a separation roller 8 (page 10, lines 19-26). A transport means 13 (specification page 11, line 9; Fig. 1), disposed adjacent to the sheet feeding means 4, receives the document from the sheet feeding means 4 and transports the document to a predetermined position on the platen 101 of the image reading apparatus 100 (specification page 10, line 27, through page 11, line 21; Fig. 1). The transport means 13 comprises belt rollers 15, 16, an endless white belt 17, and pressure rollers 18 (page 11, lines 11-19)

A sheet discharging means 21 (specification page 11, line 22; Fig. 1) is disposed adjacent to the transport means 13 at a side opposite to the sheet feeding means 4 and located at the other side of the document transport apparatus 1. The sheet discharging means 21 comprises a sheet discharging roller 22 and a driven roller 22a (page 11, lines 24-26). The sheet discharging means 21 discharges the document to the sheet discharging tray 20 after the document is read at the platen 101 (specification page 11, line 22, through page 12, line 3; Figs. 1, 2(a), 2(b)).

A switch back path 25 (specification page 12, line 4; Fig. 1) is disposed adjacent to the sheet discharging means 21 and is located between the transport means 13 and the sheet discharging tray 20. The switch back path 25 turns the document upside down, reversing a leading end and a trailing end of the document, and guides the document to the sheet discharging means 21 while turning the document upside down again (specification page 12, lines 4-17; Fig. 1).

A sheet discharging path 30 (specification page 12, line 11; Fig. 1), disposed adjacent to the sheet discharging means 21, turns the document upside down and guides the document to the sheet discharging means 21 without reversing the leading and trailing ends of the document (specification page 12, lines 11-17; Figs. 1, 2(a), 2(b)).

The invention as defined in claim 8 is directed to a document transport method (described in part as identified above in conjunction with the apparatus, and again initially at specification page 18, lines 1-5; see Figs. 9(a)-9(c), 10(a)-10(c), 11(a)-11(c), and 12(a), 12(b)). The method includes the steps of drawing a document from a sheet feeding tray 3 in a condition such that one edge of the document becomes a leading edge. The document is transported directly to a predetermined position on a platen 101 in a condition such that said one edge of the document

is the leading edge (specification page 18, line 6, through page 19, line 2).

The document is guided after one side thereof is read to a switch back path 25. The switch back path 25 turns the document upside down, and reverses a leading end and a trailing end of the document (specification page 21, line 8, through page 22, line 9).

The document is transported from the switch back path 25 toward a sheet discharging tray 20. The transporting direction of the document is changed before the document is completely discharged to the sheet discharging tray 20. The document is guided such that the transporting direction is changed to a U turn path to transport the document to the predetermined position on the platen 101 again. The document is transported to the U turn path after the other side of the document is read, and the document is discharged to the sheet discharging tray 20 (specification page 22, line 10, through page 23, line 2).

#### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

##### 35 U.S.C. § 102(b) - Taruki

Whether claims 1 and 8 are unpatentable under 35 U.S.C. § 102(b) over JP 09292742 (hereinafter "Taruki").

##### 35 U.S.C. § 103(a) - Taruki

Whether claims 2-4, 7, and 10-13 are unpatentable under 35 U.S.C. § 103(a) over Taruki.

##### 35 U.S.C. § 103(a) - Taruki in view of Honjo

Whether claim 5 is unpatentable under 35 U.S.C. § 103(a) over Taruki in view of U.S. Patent No. 4,817,933 to Honjo.

##### 35 U.S.C. § 103(a) - Taruki in view of Yano

Whether claim 6 is unpatentable under 35 U.S.C. § 103(a) over Taruki in view of U.S. Patent No. 6,467,767 to Yano.

### ARGUMENT

#### 35 U.S.C. § 102(b) - Taruki

##### Claim 1

The rejection of claim 1 under § 102(b) is in error because the disclosure of Taruki does not meet, *inter alia*, Appellant's claimed document path structural limitations. The disclosure of Taruki does not, therefore, anticipate Appellant's claimed invention.

Appellant's claimed document transport apparatus is structurally different from Taruki's automatic document feeder. Appellant's claim 1 defines an apparatus that includes in pertinent part a switch back path capable of "turning the document upside down, reversing a leading end and a trailing end of the document, and guiding the document to the sheet discharging means while turning the document upside down again," and a sheet discharging path "for turning the document upside down and guiding the document to the sheet discharging means without reversing the leading and trailing ends of the document."

The Office Action asserts that Taruki discloses "[s]heet discharging means (38) disposed adjacent to the transport means at a side opposite to the sheet feeding means and located at the other side of the document transport apparatus (fig.1)"; "[a] switch back path (20,21) disposed adjacent to the sheet discharging means and located between the transport means and the sheet discharging tray"; and "[a] sheet discharging path (22) disposed adjacent to the sheet discharging means."

Taruki actually discloses, however, that "[a] second carrying path 20 inverts the document 6 . . . , and guides it to a switch back carrying path 21 provided above the carrying belt 15."

Taruki also discloses that "[a] third carrying path 22 inverts the document 6 switched back from the switch back carrying path 21 and guides it to a paper ejection table 23 provided above the switch back carrying path 21." Finally, Taruki discloses that "a fourth path 24 is in the form of a letter S, inverts the document 6 twice without switching it back from the switch back carrying path 21, and guides it onto the contact glass 3 again" (see Taruki's English-language abstract and Fig. 1).

That is not Appellant's claimed apparatus. Appellant's claimed apparatus does not have a fourth path "in the form of a letter S," and does not invert the document twice *without* switching it back from the switch back carrying path.

Instead, Appellant's switch back path first turns the document upside down, "reversing a leading end and a trailing end of the document." The switch back path then guides the document to the sheet discharging means (i.e., "switching it back from the switch back carrying path") while turning the document upside down again. See, e.g., Appellant's Figs. 10(a)-10(c).

From Taruki's abstract and Fig. 1, it is clear that the document is inverted *again* as it is transported from fourth path 24 back to the contact glass 3 (see document path in the lower right-hand corner of Taruki's Fig. 1).

With regard to claim 1, therefore, Taruki does not meet, *inter alia*, Appellant's claimed document path structural limitations.

Since Taruki does not describe each limitation of the claimed invention, Taruki does not anticipate the invention defined by Appellant's claim 1.

#### Claim 8

Claim 8 is a method claim based upon the apparatus of claim 1. Based upon the argument presented above, claim 1 is patentable over Taruki. For at least this reason, the disclosure of Taruki

does not anticipate Appellant's document transport method as recited in claim 8.

Furthermore, Appellant's claim 8 comprises, in part, and guiding the document that the transporting direction is changed to "a U turn path" to transport the document to the predetermined position on the platen again. Claim 8 further comprises, in part, the steps of transporting the document to the "U turn path" after the other side of the document is read; and discharging the document to the sheet discharging tray. These steps are not disclosed in Taruki.

Unlike the "U turn path" recited in claim 8 for transporting the document to the predetermined position on the platen again, the abstract of Taruki only appears to disclose a fourth carrying path 24 in the form of a letter S, to guide the document on the contact glass again.

Therefore, with regard to claim 8, Taruki does not meet, *inter alia*, each of the above-described claimed method limitations.

Since Taruki does not describe each limitation of the claimed invention, Taruki does not anticipate the invention recited by Appellant's claim 8.

35 U.S.C. § 103(a) - Taruki

The rejection of claims 2-4, 7, and 10-13 under § 103(a) is in error because the disclosure of Taruki would not have rendered obvious the apparatus defined by any of claims 2-4, 7, and 10-13.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.



Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.

In addition, all of the claim limitations must be taught or suggested by the prior art.

Finally, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.

Claims 3-4, all of which depend directly from claim 2, are grouped on appeal with claim 2. Claim 7, which depends directly from claim 1, is argued independently. Claims 10 and 11, which depend variously from claim 1, are grouped. Claims 12 and 13, which depend variously from claim 1, are also grouped.

#### Claim 2

As summarized above (in the Grounds of Rejection to be Reviewed on Appeal section), the Office Action asserts that "because it is described as an automatic document feeder (title), it is obvious . . . that the automatic document feeder comprises control means electrically connected to transport means and sheet discharging means and wherein the control means controls the transport means and the sheet discharging means."

For reasons analogous to those identified above with respect to the rejection of claim 1 under § 102(b), the rejection of claim 2 is also in error. Dependent claim 2, which depends from claim 1, is allowable along with claim 1, and on its own merits.

First, as indicated above in response to the rejection of claim 1 under § 102(b), Taruki's disclosure does not teach or suggest all of Appellant's claim limitations.

Secondly, there is no suggestion or motivation in Taruki that would have led one to modify the reference in a way that would

produce the invention defined by any of Appellant's claims 2-4. Claim 2 adds the limitation of "control means electrically connected to the transport means and the sheet discharging means, said control means controlling the transport means and the sheet discharging means such that the document after one side thereof has been read is transported to the switch back path, and the document is transported again from the switch back path to the predetermined position on the platen through the sheet discharging path."

In view of the different structure disclosed by Taruki, there is simply no incentive to modify Taruki's document feeder so as to arrive at Appellant's claimed document transport apparatus.

Thirdly, the grounds of rejection constitute an improper reconstruction of Appellant's claimed invention. In view of the absence of suggestion or motivation in Taruki, the only possible manner in which the examiner could have arrived at his proposed modification is through an improper reconstruction. The examiner's modification is the result of impermissible hindsight derived from first having read Appellant's specification, and is an improper reconstruction of the claimed invention using Appellant's own disclosure as a roadmap for selectively modifying the applied prior art reference.

#### Claim 7

For reasons analogous to those identified above with respect to the rejection of claim 2, the rejection of claim 7 is also in error. Dependent claim 7, which depends directly from claim 1, is allowable along with claim 1, and on its own merits.

There is no suggestion or motivation in Taruki that would have led one to modify the reference in a way that would produce the invention defined by Appellant's claim 7. Claim 7 adds the limitation that "said sheet discharging means includes a pair of

sheet discharging rollers capable of rotating in forward and reverse directions for discharging the document to the sheet discharging tray or transporting the document to the platen, and said discharging path is located between the platen and the pair of sheet discharging rollers and branched from the switch back path."

In view of the different structure disclosed by Taruki, there is simply no incentive to modify Taruki's document feeder so as to arrive at the document transport apparatus defined by Appellant's claim 7.

#### Claim 10

For reasons analogous to those identified above with respect to the rejection of claim 2, the rejection of claim 10 is also in error. Dependent claim 10, which is directed to an image reading apparatus and which depends directly from claim 1, is allowable along with claim 1, and on its own merits.

There is no suggestion or motivation in Taruki that would have led one to modify the reference in a way that would produce the invention defined by Appellant's claim 10. Claim 10 adds the limitation of "the platen for placing the document, and reading means for reading the document placed on the platen."

In view of the different structure disclosed by Taruki, there is simply no incentive to modify Taruki's document feeder so as to arrive at the image reading apparatus defined by Appellant's claim 10.

#### Claim 12

For reasons analogous to those identified above with respect to the rejection of claim 2, the rejection of claim 12 is also in error. Dependent claim 12, which depends directly from claim 1, is allowable along with claim 1, and on its own merits.

There is no suggestion or motivation in Taruki that would have led one to modify the reference in a way that would produce the invention defined by Appellant's claim 12. Claim 12 adds the limitation that "said switch back path includes a first portion extending to a portion adjacent to the transport means for receiving the document transferred by the transport means, a second portion extending toward the sheet discharge path, and a gap disposed between the first and second portions."

Taruki neither discloses nor suggests an apparatus having the structural details defined by Appellant's claim 12. And, in view of the different structure disclosed by Taruki, there is simply no incentive to modify Taruki's document feeder so as to arrive at the document transport apparatus defined by Appellant's claim 12.

Appellant submits, therefore, that the grounds of rejection presented in the final Office Action fail to establish a *prima facie* case of obviousness with respect to each of claims 2-4, 7, and 10-13.

35 U.S.C. § 103(a) - Taruki in view of Honjo

The rejection of claim 5 under § 103(a) is in error because the combined disclosures of Taruki and Honjo would not have rendered obvious the apparatus defined by claim 5.

Claim 5 adds the limitation wherein "said guide member is positioned below the platen when the document is transported from the platen and above the platen when the document is transported to the platen, and switching means connected to the guide member for switching a position of the guide member according to a direction that the document is transported."

First, notwithstanding any disclosure Honjo may provide in regards to a switching means as recited in claim 5, the rejection is in error because there is no suggestion or motivation in either Taruki or Honjo that would have led one to select the references

and combine them in a way that would produce the invention defined by claim 5.

Second, regardless of what Honjo may disclose with regard to a switching means, the document transport apparatus defined by Appellant's claim 5 would not have been obvious because the disclosure of Honjo does not rectify the above-described structural deficiencies of Taruki in regards to claim 2 from which claim 5 depends.

Third, the grounds of rejection constitute an improper reconstruction of Appellant's claimed invention. The examiner's modification is the result of impermissible hindsight derived from first having read Appellant's specification, and is an improper reconstruction of the claimed invention using Appellant's own disclosure as a roadmap for selectively combining the applied prior art references.

Appellant submits, therefore, that the grounds of rejection presented in the final Office Action fail to establish a *prima facie* case of obviousness with respect to claim 5.

35 U.S.C. § 103(a) - Taruki in view of Yano

The rejection of claim 6 under § 103(a) is in error because the combined disclosures of Taruki and Yano would not have rendered obvious the apparatus recited in claim 6.

First, the combined disclosures of Taruki and Yano do not teach or suggest all of Appellant's claim limitations. Claim 6 depends from claim 5, wherein claim 5 adds the limitation that the guide member is positioned below the platen when the document is transported from the platen and above the platen when the document is transported to the platen, and switching means connected to the guide member for switching a position of the guide member according to a direction that the document is transported.

At paragraph 6 of the Office Action, the Examiner acknowledges that Taruki fails to disclose the added feature of claim 5. Appellant respectfully submits that Yano similarly fails to disclose the switching means of claim 5 from which claim 6 depends. Because Yano fails to disclose a switching means, Yano clearly cannot disclose the limitation that "said switching means includes a torque limiter disposed on a driving shaft of a transporting roller." (Emphasis added).

Furthermore, at paragraph 7 of the Office Action, the Examiner asserts that "Yano teaches a torque limiter disposed on a driving shaft of a transporting roller for the purpose of transmitting a driving force of predetermined torque to the roller." (Emphasis added). This is not the Appellant's invention. Although the torque limiter is disposed on a driving shaft, as disclosed in page 14, lines 24-29, it is the driving lever 45 that is driven by the torque limiter, not a roller as Yano discloses.

A torque limiter that controls an amount of torque delivered to a roller does not provide suggestion or motivation in either Taruki or Yano that would have led one to select the references and combine them in a way that would produce the torque limiter applied to the switching means as defined by claim 6. Regardless of what Yano may disclose with regard to a torque limiter, the document transport apparatus defined by Appellant's claim 6 would not have been obvious because the disclosure of Yano does not rectify the above-described structural deficiencies of Taruki.

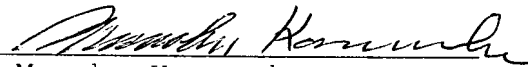
Thirdly, the grounds of rejection constitute an improper reconstruction of Appellant's claimed invention. The Examiner's modification is the result of impermissible hindsight derived from first having read Appellant's specification, and is an improper reconstruction of the claimed invention using Appellant's own disclosure as a roadmap for selectively combining the applied prior art references.

Appellant submits, therefore, that the grounds of rejection presented in the final Office Action fail to establish a *prima facie* case of obviousness with respect to claim 6.

Appellant respectfully submits that each of the final rejections presented in the Office Action is in error, and requests that each of the final rejections be reversed.

Respectfully submitted,

KANESAKA BERNER AND PARTNERS

By   
Manabu Kanesaka  
Reg. No. 31,467

1700 Diagonal Road, Suite 310  
Alexandria, VA 22314  
(703) 519-9785

### CLAIMS APPENDIX

1. A document transport apparatus for an image reading apparatus with a platen comprising:

a sheet feeding tray, and a sheet discharging tray,

sheet feeding means for drawing a document from the sheet feeding tray, said sheet feeding means being disposed at one side of the document transport apparatus,

transport means, disposed adjacent to the sheet feeding means, for receiving the document from the sheet feeding means and transporting the document to a predetermined position on the platen of the image reading apparatus,

sheet discharging means disposed adjacent to the transport means at a side opposite to the sheet feeding means and located at the other side of the document transport apparatus, said sheet discharging means discharging the document to the sheet discharging tray after the document is read at the platen,

a switch back path disposed adjacent to the sheet discharging means and located between the transport means and the sheet discharging tray, said switch back path turning the document upside down, reversing a leading end and a trailing end of the document, and guiding the document to the sheet discharging means while turning the document upside down again, and

a sheet discharging path, disposed adjacent to the sheet discharging means, for turning the document upside down and guiding the document to the sheet discharging means without reversing the leading and trailing ends of the document.

2. A document transport apparatus according to claim 1, further comprising control means electrically connected to the transport means and the sheet discharging means, said control means controlling the transport means and the sheet discharging means such that the document after one side thereof has been read is



transported to the switch back path, and the document is transported again from the switch back path to the predetermined position on the platen through the sheet discharging path.

3. A document transport apparatus according to claim 2, wherein said sheet discharging means discharges the document to the sheet discharging tray located below the sheet feeding tray and above the platen.

4. A document transport apparatus according to claim 2, wherein said control means controls the transport means and the sheet discharging means such that the document is discharged to the sheet discharging tray via the sheet discharging path after the document is transported from the switch back path to the predetermined position on the platen through the sheet discharging path and after the document is read.

5. A document transport apparatus according to claim 2, further comprising a guide member disposed at a discharge side of the platen, said guide member being positioned below the platen when the document is transported from the platen and above the platen when the document is transported to the platen, and switching means connected to the guide member for switching a position of the guide member according to a direction that the document is transported.

6. A document transport apparatus according to claim 5, wherein said switching means includes a torque limiter disposed on a driving shaft of a transporting roller.

7. A document transport apparatus according to claim 1, wherein said sheet discharging means includes a pair of sheet discharging

rollers capable of rotating in forward and reverse directions for discharging the document to the sheet discharging tray or transporting the document to the platen, and said discharging path is located between the platen and the pair of sheet discharging rollers and branched from the switch back path.

8. A document transport method comprising:

drawing a document from a sheet feeding tray in a condition such that one edge of the document becomes a leading edge,

transporting the document directly to a predetermined position on a platen in a condition such that said one edge of the document is said leading edge,

guiding the document after one side thereof is read to a switch back path, said switch back path turning the document upside down, and reversing a leading end and a trailing end of the document,

transporting the document from the switch back path toward a sheet discharging tray,

changing a transporting direction of the document before the document is completely discharged to the sheet discharging tray,

guiding the document that the transporting direction is changed to a U turn path to transport the document to the predetermined position on the platen again,

transporting the document to the U turn path after the other side of the document is read, and

discharging the document to the sheet discharging tray.

10. An image reading apparatus comprising the document transport apparatus according to claim 1, the platen for placing the document, and reading means for reading the document placed on the platen.

11. An image reading apparatus according to claim 10, wherein said control means controls the transport means and the sheet discharging means such that the document is discharged to the sheet discharging tray via the sheet discharging path after the document is transported from the switch back path to the predetermined position on the platen through the sheet discharging path and after the document is read.
12. A document transport apparatus according to claim 1, wherein said switch back path includes a first portion extending to a portion adjacent to the transport means for receiving the document transferred by the transport means, a second portion extending toward the sheet discharge path, and a gap disposed between the first and second portions.
13. A document transport apparatus according to claim 12, wherein said sheet discharging path includes a U turn path connecting the first and second portions without passing the gap.
14. (ALLOWED) A document transport method according to claim 8, wherein said switch back path includes a gap so that the document sent into the gap in one direction is sent out in a direction opposite to said one direction.

Serial No. 10/798,300

**EVIDENCE APPENDIX**

No copies of evidence are appended hereto.

**RELATED PROCEEDINGS APPENDIX**

No copies of decisions are appended hereto.